

IN THE CLAIMS:

Please cancel claims 4 and 13-20.

Please amend claim 1 as follows:

1. (Amended) A semiconductor production apparatus including a process chamber; a wafer support disposed within said process chamber for supporting a semiconductor wafer; and a heating source for heat treatment of the semiconductor wafer supported by said wafer support;

wherein said wafer support comprises a susceptor having an upper surface for mounting said semiconductor wafer thereon, and a susceptor support shaft for supporting said susceptor from thereunder;

wherein said susceptor support shaft has a main shaft positioned substantially coaxial with a center of said susceptor, and at least three arms radially extending from an upper end of said main shaft, each said arm having a distal end provided with a protrusion directed toward said susceptor;

wherein a peripheral portion of a lower surface of said susceptor is formed with depressions, each said depression having an elongated form extending in a radial direction of said susceptor, each said depression having a width substantially identical to an outside diameter of said protrusion, adapted to engage said protrusion;

wherein a portion of each of said depressions extends along a direction substantially parallel to a plane defined by at least one of said upper surface of said susceptor or said lower surface of said susceptor so as to permit movement of said susceptor in a substantially radial direction relative to said protrusions along said depressions; and

wherein each of said depressions has a closed end on an outer peripheral side thereof, said protrusions being configured to engage said closed end of said depressions at ambient temperature.

2. A semiconductor production apparatus according to claim 1, wherein said heating source is disposed under said susceptor.

3. A semiconductor production apparatus according to claim 1, wherein said depressions have an elongated form extending in a radial direction of said susceptor.

4. (Cancel) A semiconductor production apparatus according to claim 3, wherein said protrusions are configured to engage said depressions on outer peripheral sides thereof at ambient temperature.

5. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises graphite.

6. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises graphite having a surface coated with silicon carbide.

7. A semiconductor production apparatus according to claim 1, wherein said susceptor comprises silicon carbide.

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8. A semiconductor production apparatus according to claim 1, wherein said susceptor support shaft comprises silica glass.

9. A semiconductor production apparatus according to claim 1, wherein said process chamber comprises an inlet for a process gas, and an outlet for letting out the gas from said process chamber.

10. A semiconductor production apparatus according to claim 9, wherein said process gas is a gas for carrying out an epitaxial growth process.

11. A semiconductor production apparatus according to claim 1, wherein said arms incline upward as said arms extends radially outward.

12. A semiconductor production apparatus according to claim 1, wherein said depressions are disposed at equally spaced intervals in a circumferential direction of said susceptor.

13. (Cancel) A semiconductor production apparatus according to claim 1, wherein each of said depressions has an elongated form extending in said radial direction.

14. (Cancel) A semiconductor production apparatus comprising:
a processing chamber
a susceptor disposed within said process chamber and having an upper surface or mounting a semiconductor wafer thereon;
a support shaft disposed within said process chamber for supporting said susceptor; and
a heating source disposed so as to heat the wafer mounted on said susceptor, wherein said susceptor has a plurality of depressions formed in a lower surface thereof;

wherein said support shaft has a main shaft positioned coaxial with a center of said susceptor, and a plurality of arms radially extending from an upper end of said main shaft, each of said arms having a distal end provided with a protrusion extending upward, said protrusions correspondingly engaged in the associated depressions such that said protrusions can slide along said depressions only in a substantially radial direction of said susceptor; and

wherein said susceptor is supported only by said protrusions provided on said distal end of each of said arms.

15. (Cancel) A semiconductor production apparatus according to claim 14, wherein said susceptor has a coefficient of thermal expansion greater than that of said support shaft.